January 1974

Test 1169: Steiger Tiger II Diesel (Also Steiger Panther III - ST-320 Diesel)

Tractor Museum
University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

NEBRASKA TRACTOR TEST 1169 – STEIGER TIGER II DIESEL
(ALSO STEIGER PANTHER III – ST-320 DIESEL)

DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crank-shaft speed rpm	Fuel Consumption Slip of drivers %	Gal per hr	Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cool-ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours in 6th Gear (3-Hi)											
262.13	14606	6.73	2600	3.53	18.886	0.499	13.88	168	51	58	28.715
75% of Pull at Maximum Power—Ten Hours in 6th Gear (3-Hi)											
211.66	11286	7.03	2687	2.49	16.669	0.545	12.70	165	41	50	29.002
50% of Pull at Maximum Power—Two Hours in 6th Gear (3-Hi)											
145.97	7611	7.19	2722	1.55	13.758	0.653	10.61	166	48	59	28.790
50% of Pull at Reduced Engine Speed—Two Hours in 8th Gear (4-Hi)											
144.47	7576	7.15	1639	1.59	9.750	0.467	14.82	165	46	55	28.755
MAXIMUM POWER WITH BALLAST											
222.77	28097	2.97	2667	14.76	3rd Gear (2-Lo)			167	53	66	28.600
261.19	24375	4.02	2601	7.19	4th Gear (2-Hi)			167	45	54	28.660
265.02	19040	5.22	2601	4.81	5th Gear (3-Lo)			167	45	53	28.640
270.21	15052	6.73	2600	3.53	6th Gear (3-Hi)			166	45	52	28.620
268.66	11375	8.86	2603	2.47	7th Gear (4-Lo)			166	45	53	28.650

VARYING DRAWBAR PULL AND TRAVEL WITH BALLAST
6th Gear (3-Hi)

Pounds Pull	15052	16845	18604	20148	20188	19259
Horsepower	270.21	271.24	262.95	246.98	212.12	169.56
Crankshaft Speed rpm	2600	2345	2073	1808	1554	1296
Miles Per Hour	6.73	6.04	5.30	4.60	3.94	3.30
Slip of Drivers %	3.53	4.18	4.65	5.44	5.44	5.12

TRACTOR SOUND LEVEL WITH CAB	dB (A)
Maximum Available Power 2 Hours	87.0
75% of Pull at Max. Power 10 Hours	86.0
50% of Pull at Max. Power 2 Hours	85.5
50% of Pull at Reduced Engine Speed 2 Hours	82.0
Bystander 10th Gear (5-Hi)	98.0

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi	Four 23.1-34;8; 14 & 12	Four 23.1-34;8; 14 & 12
Ballast	—Liquid	None	None
	Cast Iron	20 lb each	None
Front tires	—No., size, ply & psi	Four 23.1-34;8; 14 & 12	Four 23.1-34;8; 14 & 12
Ballast	—Liquid	542 lb each	None
	Cast Iron	20 lb each	None
Height of drawbar		16 inches	16 inches
Static weight with operator—rear		11650 lb	11570 lb
	front	18280 lb	16030 lb
	total	29930 lb	27600 lb

Department of Agricultural Engineering

Dates of Test: November 15 to November 26, 1974

Manufacturer: STEIGER TRACTOR, INC., FARGO, NORTH DAKOTA

FUEL, OIL AND TIME Fuel No 2 Diesel **Cetane No** 51.9 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60°** 0.8315 **Weight per gallon** 6.923 lb **Oil SAE** 30 **API service classification** CD, CC, CB, CA, SE, SD, SC and SB **To motor** 5.834 gal **Drained from motor** 3.675 gal **Transmission and Power Divider** 303 oil or equivalent **Front and rear axle** SAE 90 **Total time engine was operated** 45 hours

ENGINE Make Cummins VT 903 Diesel **Type** eight cylinder Vee with turbo-charger **Serial No** 10427069 **Crankshaft Mounted** lengthwise **Rated rpm** 2600 **Bore and stroke** 5.5″ x 4.75″ **Compression ratio** 15.5 to 1 **Displacement** 903 cu in **Cranking system** 12 volt electric **Lubrication** pressure **Air cleaner** precleaner and two replaceable dry type treated paper elements, one primary, one safety and aspirator **Oil filter** one full flow and one bypass replaceable elements **Oil Cooler** engine coolant heat exchanger **Transmission and power divider** cooled by a separate radiator **Fuel filter** one replaceable element **Muffler** none **Cooling medium temperature control** two thermostats

CHASSIS Type four-wheel drive **Serial No** 30152 **Tread width** rear 71.8″ to 131.6″ front 71.8″ to 131.6″ **Wheel base** 122″ **Center of gravity** (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 73.5″ Vertical distance above roadway 45.4″ Horizontal distance from center of rear wheel tread 0″ to the right/left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Advertised speeds mph** first 2.0 second 2.5 third 3.3 fourth 4.1 fifth 5.2 sixth 6.7 seventh 8.7 eighth 11.1 ninth 13.8 tenth 17.6 reverse 2.0 and 2.5 **Clutch** dry double disc operated by foot pedal **Brakes** caliper disc brake on drive line operated hydraulically by foot pedal **Steering** hydrostatic **Turning radius** (on concrete surface without brake) right 266″ left 266″ **Turning space diameter** (on concrete surface without brake) right 585″ left 585″

REPAIRS AND ADJUSTMENTS No repairs or adjustments

REMARKS: The engine manufacturer's warrantee is voided if the fuel flow rate exceeds 18.9 gallons per hour for this model and application. All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure.

Five gears were chosen between 15% slip and 15 mph. (Only one gear permitted over 8 mph).

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1169.**

L. F. LARSEN
Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman
W. E. SPLINTER
D. E. LANE
Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station
Institute of Agriculture and Natural Resources. H. W. Ottoson, Director